

Application No. 10/610,936  
Attorney Docket No. 4493-053294



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/610,936 Confirmation No. 2535  
Applicant : Geoff Smith et al.  
Filed : June 30, 2003  
Title : STAGGERED ROWS IN A CT OR SERPENTINE FIN  
CORE WITH A ROUND TUBE TO HEADER JOINT  
Group Art Unit : 3726  
Examiner : John C. Hong  
Customer No. : 28289

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

POWER OF ATTORNEY BY ASSIGNEE  
OF ENTIRE INTEREST (REVOCATION OF PRIOR POWERS)

Sir:

As assignee of record of the entire interest of the above-identified patent application, all powers of attorney previously given are hereby revoked and I hereby appoint the practitioners associated with **Customer Number 28289** to transact all business in the United States Patent and Trademark Office connected therewith.

Customer Number 28289 is the Customer Number for the law firm of The Webb Law Firm whose address is 700 Koppers Building, 436 Seventh Avenue, Pittsburgh, Pennsylvania 15219-1845, Telephone No. 412-471-8815.

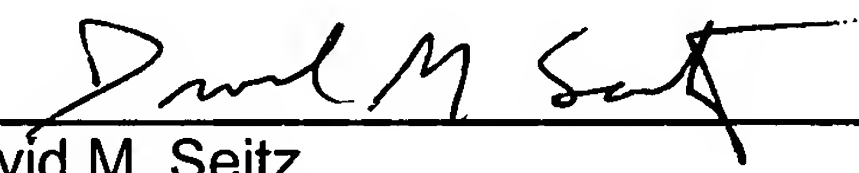
**All correspondence and telephone calls should be addressed to  
Customer Number 28289.**

Ownership is established by an Assignment from the inventors of the above-identified patent application to Westinghouse Air Brake Technologies Corporation, which was recorded in the United States Patent and Trademark Office on November 26, 2003, at Reel 014727/Frame 0575.

Attached to this Power is a Certificate Under 37 C.F.R. 3.73(b).

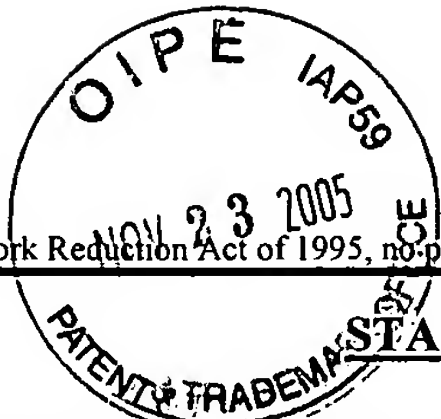
I, David M. Seitz, whose signature appears below, aver that as Assistant Secretary of Westinghouse Air Brake Technologies Corporation, I am empowered to sign this statement on behalf of the Assignee.

WESTINGHOUSE AIR BRAKE TECHNOLOGIES  
CORPORATION

By:   
David M. Seitz  
Assistant Secretary

Date: Oct 31, 2005

Assignee of Entire Interest

**STATEMENT UNDER 37 CFR 3.73(b)**Applicant/Patent Owner: Geoff Smith et al.Application No.: 10/610,936Filed: June 30, 2003Entitled: Staggered Rows in a CT or Serpentine Fin Core with a Round Tube to Header JointWestinghouse Air Brake Technologies Corporation, a Delaware corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title, and interest.  
The extent (by percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 014727, Frame 0575, or for which a copy thereof is attached.

**OR**

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.☒ Copies of assignments or other documents in the chain of title are attached.*[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]*

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Oct 31, 2005  
Date412 825 1142  
Telephone numberDavid M. Seitz

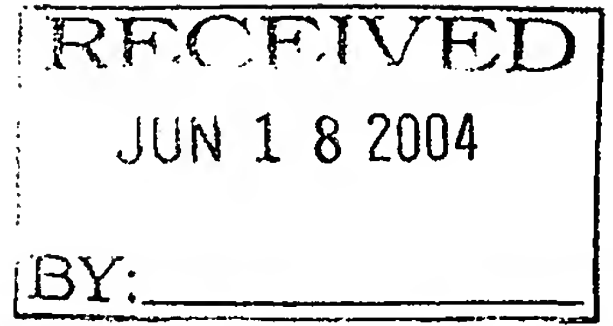
Typed or printed name

David M Seitz  
SignatureAssistant Secretary

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

JUNE 15, 2004

PTAS



\*102611562A\*

JAMES RAY & ASSOCIATES  
JAMES O. RAY, JR.  
2640 PITCAIRN ROAD  
MONROEVILLE, PA 15146

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 11/26/2003

REEL/FRAME: 014727/0575

NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).  
DOCKET NUMBER: WAB 03187

ASSIGNOR:  
SMITH, GEOFF

DOC DATE: 10/22/2003

ASSIGNOR:  
KORTH, JAY

DOC DATE: 10/27/2003

ASSIGNEE:  
WESTINGHOUSE AIR BRAKE  
TECHNOLOGIES CORPORATION  
1001 AIR BRAKE AVENUE  
WILMERDING, PENNSYLVANIA 15148

SERIAL NUMBER: 10610936

FILING DATE: 06/30/2003

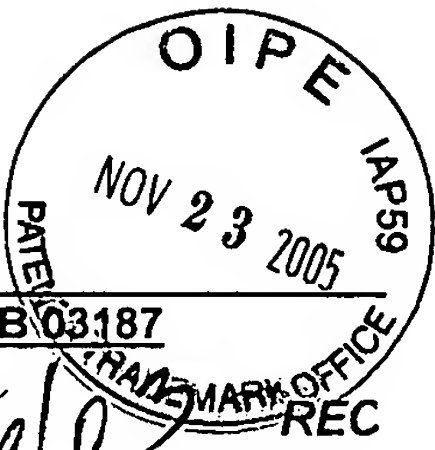
PATENT NUMBER:

ISSUE DATE:

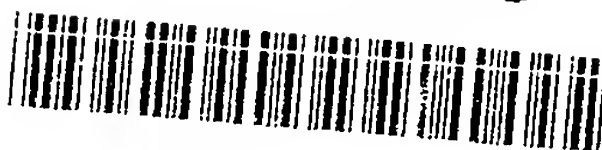
TITLE: STAGGERED ROWS IN A CT OR SERPENTINE FIN CORE WITH A ROUND TUBE TO  
HEADER JOINT

014727/0575 PAGE 2

JOANN STEWART, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



12-01-2003

102611562  
PATENTS ONLY

ATTORNEY DOCKET WAB 03187

FORM PTO-1595

(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

GEOFF SMITH  
JAY KORTHAdditional name(s) & address(es) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies)

Name: WESTINGHOUSE AIR BRAKE  
TECHNOLOGIES CORPORATION

Internal Address:

Street Address: 1001 AIR BRAKE AVENUECity: WILMERDING State: PA ZIP: 15148Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ OtherExecution Date: October 22, 2003 & October 27, 20034. Application number(s) or patent number(s) 10/610,936

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s):

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed.

Name of Agent: James O. Ray, Jr.Name: JAMES RAY & ASSOCIATES

Internal Address:

Street Address: 2640 PITCAIRN ROADCity: MONROEVILLE State: PA ZIP: 151466. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41)

\$ 40.00☒ Enclosed☐ Authorized to be charged to deposit account

8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

James O. Ray, Jr.

NAME OF PERSON SIGNING

SIGNATURE

November 24, 2003

DATE

Total number of pages including cover sheet, attachments, and document: 2Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

## U.S. ASSIGNMENT

IN CONSIDERATION of the sum of One Dollar (\$1.00), and of other good and valuable consideration paid to the undersigned inventor(s) GEOFF SMITH, JAY KORTH (hereinafter ASSIGNORS) by

### WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION

(hereinafter ASSIGNEE), the receipt of which is hereby acknowledged, the undersigned hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to the invention entitled:

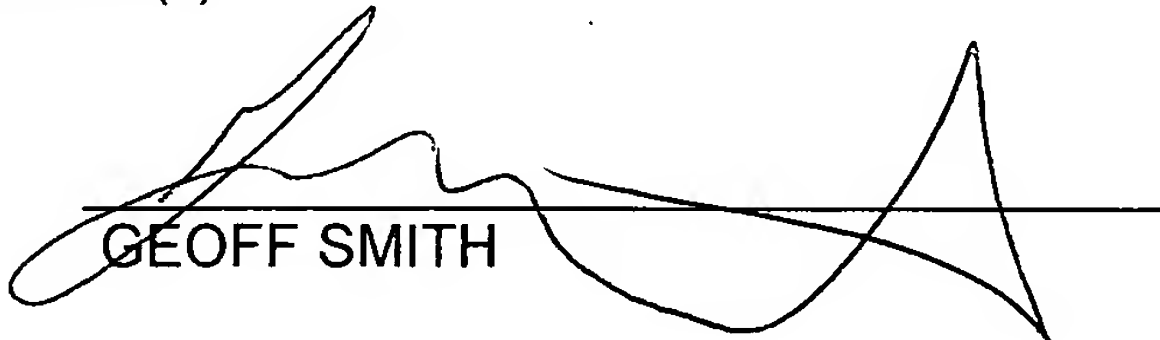
### STAGGERED ROWS IN A CT OR SERPERNTINE FIN CORE WITH A ROUND TUBE TO HEADER JOINT

for which application for Letters Patent of the United States was executed on even date herewith, and all Letters Patent of the United States and corresponding Foreign patents to be obtained therefor on said application or any continuation, division, renewal, substitute, reissue or reexamination thereof for the full term or terms for which the same may be granted.

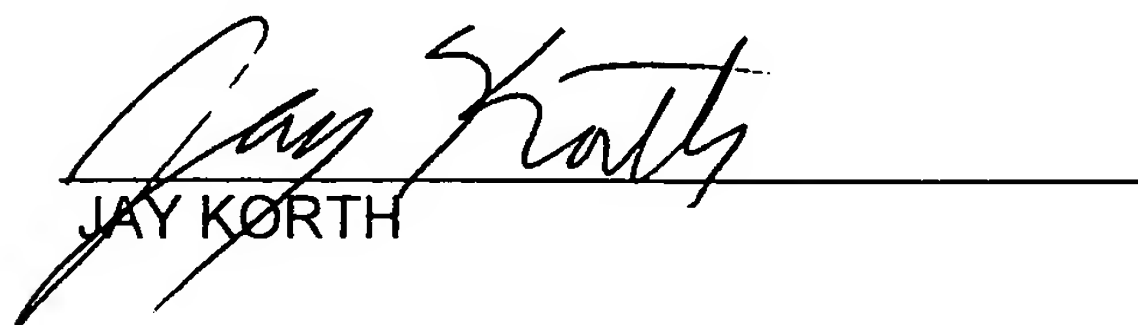
THE ASSIGNORS agree(s) to execute all papers necessary in connection with this application and any continuing, divisional, reissue or reexamination applications thereof and also to execute separate assignments in connection with such applications as the ASSIGNEE may deem necessary or expedient.

THE ASSIGNORS agree(s) to execute all papers necessary in connection with any interference or litigation which may be declared concerning this application or any continuation, division, reissue or reexamination thereof or Letters Patent or reissue patent issued thereof and to cooperate with the ASSIGNEE in every way possible in obtaining and producing evidence and proceeding with such interference or litigation.

IN WITNESS WHEREOF, the undersigned inventor(s) has (have) affixed his/her/their signature(s).

  
GEOFF SMITH

DATE 10/22/03

  
JAY KORTH

DATE 10/27/03

I HEREBY CERTIFY THAT THIS CORRESPONDENCE  
IS BEING DEPOSITED WITH THE UNITED STATES  
POSTAL SERVICE AS FIRST CLASS MAIL IN AN  
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COMMISSIONER OF PATENTS AND TRADEMARKS  
WASHINGTON, D.C. 20231

ON November 24, 2023  
Janet Lucas





IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	)	Group Art Unit: 3743
GEOFF SMITH	)	Examiner: TBA
Serial No.: 10/610,936	)	Attorney Docket: WAB 03187
Filed: June 30, 2003	)	Date: November 24, 2003

For: STAGGERED ROWS IN A CT OR SERPENTINE FIN CORE  
WITH A ROUND TUBE TO HEADER JOINT

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MAIL STOP ASSIGNMENT  
COMMISSIONER FOR PATENTS  
Alexandria, Virginia 22313

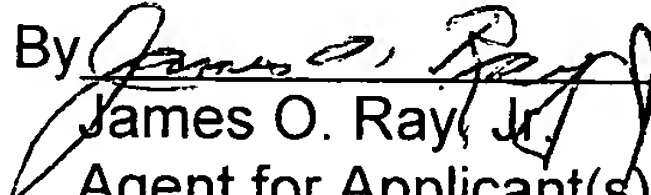
TRANSMITTAL OF ASSIGNMENT DOCUMENT

Dear Sir:

Enclosed, herewith, is an Assignment cover sheet and an executed Assignment form for the above-referenced patent application.

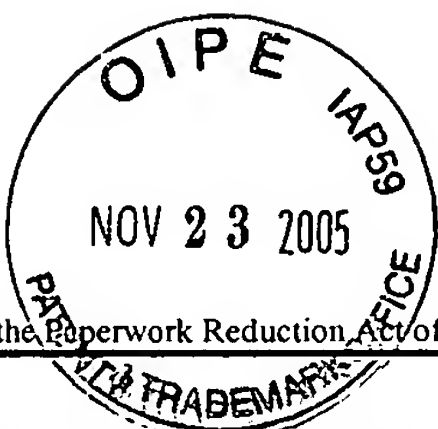
Also, enclosed is check no. 5126 for Forty Dollars (\$40.00) to cover the filing of the Assignment document.

Respectfully submitted,

By   
James O. Ray, Jr.  
Agent for Applicant(s)  
Registration No. 27,666

JAMES RAY & ASSOCIATES  
2640 PITCAIRN ROAD  
MONROEVILLE, PA 15146

TELEPHONE: 412-380-0725  
FACSIMILE: 412-380-0748



FW

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/610,936
	Filing Date	June 30, 2003
	First Named Inventor	Geoff Smith
	Art Unit	3726
	Examiner Name	John C. Hong
Total Number of Pages in This Submission	Attorney Docket Number	4493-053294

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input checked="" type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Certified Copy of Priority Document(s)	Remarks	
<input type="checkbox"/> Response to Missing Parts/Incomplete Application		
<input type="checkbox"/> Response to Missing Parts Under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	The Webb Law Firm		
Signature			
Printed Name	Richard L. Byrne		
Date	November 21, 2005	Reg. No.	28,498

CERTIFICATE OF TRANSMISSION / MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
Signature			
Typed or printed name	Linda L. Marlowe	Date	November 21, 2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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